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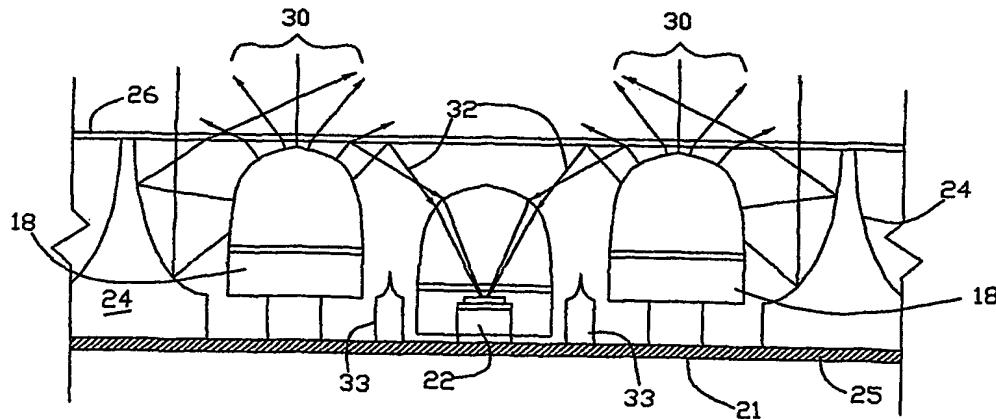
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(54) Title: **LED ILLUMINATION SOURCE/DISPLAY WITH INDIVIDUAL LED BRIGHTNESS MONITORING CAPABILITY AND CALIBRATION METHOD**



(57) Abstract: An LED area illumination source/display (10) such as an electronic billboard is made up of a number of individual pixels with each pixel including a number of LEDs, e.g., a red (18), blue (19) and green LED (20), with each LED representing a primary color being arranged to be energized separately. At least one light sensor (22) is incorporated into the display for providing a measure of the light emitted from each LED representing a primary color in each pixel. The source/display (10) is susceptible of being self-calibrated by initially energizing the LEDs (18, 19, 20) at less than a maximum level and increasing the energization level as necessary during use to restore the original light output of degraded LEDs.